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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,752	07/28/2006	Hiroaki Dei	A3156.0037	9935
32173 7590 09/13/2011 DICKSTEIN SHAPIRO LLP 1633 Broadway NEW YORK, NY 10019				
EXAMINER KIM, HEE-YONG				
ART UNIT 2482		PAPER NUMBER		
MAIL DATE 09/13/2011		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/587,752

## Applicant(s)

DEI ET AL.

## Examiner

HEE-YONG KIM

## Art Unit

2482

**Period for Reply**  
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 5) ☒ Claim(s) 155,156,158-174,176-185,187 and 189-192 is/are pending in the application.
- 5a) Of the above claim(s) 155,156,158-174,187 and 189 is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 176-185, and 190-192 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-942)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. This office action is in reply to Applicant's Response dated July 29, 2011.
2. **Claims 143-154, 157, 175, 186 and 188** have been cancelled.
3. **Claims 155, 156, 158-163, 166-168, 170-171, 176-177 and 179-185** have been amended.
4. **Claims 189-192** have been newly added.
5. **Claims 155-156, 158-174, 176-185, 187 and 189-192** are pending.
6. **Claims 155-156 and 158-174, 187 and 189** are withdrawn from consideration.

### *Response to Arguments*

7. Applicant's arguments with respect to the prior art rejection over **Claims 155-156, 158-174, 176-185, 187 and 189-192** have been considered but are moot in view of the new ground(s) of rejection.

### *Election/Restrictions*

8. Newly submitted **claims 155-156 and 158-174, 187 and 189** are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the applicant elected Species VI before. However, the amended Independent claims 155 and 158 belong to Species I or III or V, all of which have N distribution sessions for N encoded data with a time difference or interleaving. The previously elected species VI multiplexes N encoded data. The remaining dependent

claims 156 and 159-174 are dependent on either of two independent claims. Therefore, all of them belong to non-elected species.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 155-156 and 158-174, 187 and 189 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Objections***

9. **Claim 181** is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

10. Regarding **claim 181**, the features of the dependent claim 181 are already included in the independent claim 176 which it depends on.

11. **Claim 190** is objected under 37 CFR 1.75 as being substantial duplicate of claim 176.

Applicant is advised that should claim 176 be found allowable, claim 190 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing

one claim to object to the other as being a substantial duplicate of the allowed claim.

See MPEP § 706.03(k).

12. **Claim 192** is objected under 37 CFR 1.75 as being substantial duplicate of claim 191.

Applicant is advised that should claim 191 be found allowable, claim 192 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 112***

13. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

14. **Claims 177 and 178** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding **claim 177**, if it incorporated with the independent claim 176, it claims transmission of N encoded data and the error correction data and Intra-Frame encoded

data. However, the original disclosure contains only either the transmission of N encoded data and the error correction data, or either the transmission of N encoded data and Intra-Frame encoded data,

15. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

16. **Claims 176 and 190-192** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claims 176 and 190-192** recite "wherein M is an integer equal to or greater than one". However, there is insufficient antecedent basis for this limitation "M" in the claim. For the purpose of prosecution of the application, Examiner interprets "(a) at least a part of first through Nth encoded data" as "(a) at least a part of first through Mth encoded data"

### ***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. **Claims 176, 180-182, and 190-192** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu (US 2005/0,111,541) in view of Hillegass (US

2002/0,003,886), further in view of D'Aria (US 4,928,288), hereafter referenced as Hatabu and Hillegass and D'Aria.

Regarding **claim 176**, in the same field of endeavor, Hatabu discloses Moving Image Transferring System, Moving Image Encoding Apparatus, Moving Image Decoding Apparatus, and Moving Image Transferring Program. Hatabu specifically discloses A content receiving apparatus (Fig.1) comprising: means for receiving encoded data and error correction code data (Encoded Data Receivers, Fig.1; Packet error detecting code 116-2, Fig.2), from at least one session and identifying individual ones of the encoded data (Packet Identification Number Added, Fig.2) and the error correction code data (Packet error detecting code 116-2, Fig.2) therefrom, the encoded data and error correction code data being transmitted from a content distribution apparatus (Fig.2) comprising:

means for reading at least one item of encoded data and at least one item of error correction code data from a content file (It was obvious by moving pictures encoder/sender in Fig.1, because it was obvious that encoders store the encoded data into one or plural content files and senders read the encoded data from the content file to send encoded data);

first through Nth encoded data transmission means (Fig.1) for receiving the read encoded data and outputting first through Nth encoded data, wherein N is an integer equal to or greater than one;

at least one error correction code data transmission means (Fig.2) for receiving the read error correction code data and outputting the error correction code data; and

means for multiplexing data ( Multiplexer, 602, Fig.6) from at least two out of the first through Nth encoded data transmission means, for transmission of at least one of

(a) at least a part of the first through Nth encoded data (Fig.1) ; and

(b) at least a part of the error correction code data (Fig.2), being transmitted, wherein the content file is created by a content encoding apparatus (encoder/sender, Fig.1

comprising: means for encoding an input signal or an input data file at mutually different compression rates (different compression ratio, par.48), respectively, wherein M is an integer equal to or greater than one;

means for generating at least one item of error correction code data from at least one of said first through Mth encoded data (Fig.2); and

the content receiving apparatus (Moving Picture Decoding Apparatus 200, Fig.1) further comprising: means for extracting the encoded data received with no transmission error and no dropout from among the received data (Fig.7: S704 and S705) and for restoring the encoded data using the error correction code data when the transmission error or the dropout is present to reconstruct the encoded data (Concealment Decoding Process S708, Fig.7).

However, Hatabu fails to disclose means for writing the encoded data and the error correction code data, with a preset time difference or with interleaving, into a file as independent tracks, respectively and means for selecting whether to receive the error correction code data when receiving at least two of the error correction code data or the error correction code data used in error correction processing, based on at least one of:



error/loss rate of received data; error/loss state of data on a transmission path; error correction encoding scheme; available power; and setting set in advance.

In the analogous field of endeavor, Hillegass discloses Method and System for Storing Multiple Media Tracks in a Single Multiple Encrypted Computer File. Hillegass specifically discloses storing audio or video data into a file as independent tracks (Fig.2; par. 2) with a preset time difference (there should be a definite time difference writing between multiple tracks) , in order to share the common information among tracks (par.8).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically storing N encoded video data into N tracks and also error correcting code data as an independent track as well, in order to share the common information among tracks. However, Hatabu and Hillegass still fail to discloses means for selecting whether to receive the error correction code data when receiving at least two of the error correction code data or the error correction code data used in error correction processing, based on at least one of: error/loss rate of received data; error/loss state of data on a transmission path; error correction encoding scheme; available power; and setting set in advance.

In the analogous field of endeavor, D'Aria discloses Decoding Method and Device with Erasure Detection for Multilevel Transmission Systems. D'Aria specifically discloses that the bit error rate is determined based on Signal Power ( $E_b/N_0$ , Fig.5) and error correction encoding scheme (Curve 1-4).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu and Hillegass by providing specifically selecting the error correction codes with error rate less than a pre-determined error rate based on the available power level (SNR) and the error correction encoding scheme, in order to reduce the computation load by skipping the error correction processing beyond the error tolerance. The Hatabu moving image transferring system, incorporating the Hillegass storing N encoded video data into N tracks and also error correcting code data as an independent track as well, further incorporating the D'Aria selecting the error correction codes with error rate less than a pre-determined error rate based on the available power level (SNR) and the error correction encoding scheme, has all the features of claim 176.

Regarding **claim 180**, Hatabu and Hillegass and D'Aria discloses everything claimed as applied above (see claim 176). Hatabu further discloses means for selecting whether to receive the data by at least one of the encoded data receiving means based on at least one of: error/loss rate of received data; available power; and setting set in advance (N Encoded data receiver, 201-1 to 201-N, Fig,1).

Regarding **claim 181**, the feature of claim 181 is already included in the claim 176 which claim 181 is dependent on. Therefore, it is rejected the same way as claim 176 too.

Regarding **claim 182**, Hatabu and Hillegass and D'Aria teach everything as applied above (see 176). However, Hatabu and Hillegass and D'Aria do not disclose expressly wherein the means for reconstructing the encoded data determines whether

the encoded data is duplicated or not based on an identification number assigned to a transmitting unit of the encoded data.

However, Hatabu discloses adding frame/packet identification number to the encoded packet (116-1, 116-2, Fig.2), in order to detect a packet loss. Therefore, it was obvious that the packet identification number can be used to detect the duplicate of packet which has the same packet number as the previously received one, in order to avoid the incorrect reconstruction by combining duplicate packets.

Therefore, given this motivation, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu and Hillegass and D'Aria by providing specifically determining whether the encoded data is duplicated or not based on an identification number assigned to a transmitting unit of the encoded data, in order to avoid the incorrect reconstruction by combining duplicate packets. The Hatabu moving image transferring system, incorporating the Hillegass storing N encoded video data into N tracks and also error correcting code data as an independent track as well, further incorporating the D'Aria selecting the error correction codes with error rate less than a pre-determined error rate based on the available power level (SNR) and the error correction encoding scheme., further incorporating determining whether the encoded data is duplicated or not based on an identification number assigned to a transmitting unit of the encoded data, has all the features of claim 182.

Regarding **claim 190**, the claim is identical to the claim 176. Therefore, it is rejected for the same reason as claim 176.

Regarding **claim 191**, the claim 176 has all the feature of claim 191 except means for multiplexing data from at least two out of the first through Nth encoded data transmission means, for transmission of at least one of

(a) at least a part of the first through Nth encoded data; and

(b) at least a part of the error correction code data, being transmitted with time difference or interleaving. However, Hatabu further discloses means for multiplexing data (Multiplexer, 602, Fig.6) from at least two out of the first through Nth encoded data transmission means, for transmission of at least one of

(a) at least a part of the first through Nth encoded data (Fig.1) ; and

(b) at least a part of the error correction code data (Fig.2), being transmitted with time difference (property of multiplexing) or interleaving. Therefore, Hatabu and Hillegass and D'Aria teach all the features of claim 191.

Regarding **claim 192**, the claim is identical to the claim 191 Therefore, it is rejected for the same reason as claim 191

19. **Claims 177-178** are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Hatabu in view of unpatentable over Hatabu in view of Hillegass, further in view of D'Aria, and further in view of Iwami (US 5,528,284), hereafter referenced as Iwami.

Regarding **claim 177**, Hatabu and Hillegass and D'Aria teach everything as applied above (see 176). However, Hatabu and Hillegass and D'Aria do not disclose

expressly further including: means for receiving Intra-frame encoded data from at least one session.

However, Hatabu discloses interframe prediction (Fig.2). In the analogous field of endeavor, Iwami discloses Video Communication Method Having Refresh Function of Coding Sequence and Terminal Devices Thereof. Iwami specifically discloses that intra frame is obtained by interframe predictive coding differential information between one video frame to be coded and one preceding frame (col.1, line 23-26).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time of invention that the encoded data includes at least one Intra frame encoded data from at least one session.

Regarding **claim 178**, Hatabu and Hillegass and D'Aria and Iwami discloses everything claimed as applied above (see claim 177). Iwami further teaches wherein means for reconstructing the encoded data selects the Intra-frame encoded data by a predetermined device (intra frame is obtained by interframe predictive coding differential information between one video frame to be coded and one preceding frame, col.1, line 23-26).

20. **Claims 179** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Hillegass, further in view of D'Aria, and further in view of Colligan (US 6,415,031), hereafter referenced as Colligan.

Regarding **claim 179**, Hatabu and Hillegass and D'Aria teach everything as applied above (see 176). However, Hatabu and Hillegass and D'Aria fail to disclose

means for restoring the encoded data using at least one of: an encryption key obtained by call connection processing when the encoded data is encrypted; a distributed encryption key; and a predetermined encryption key.

In the analogous field of endeavor, Colligan discloses Selective and Renewable Encryption for Secure Distribution. Colligan specifically discloses means (Video Decrypted 510, Fig. 5A) for restoring the encoded data using a distributed encryption key (key have been received via a communication channel), in order to do secure video distribution (col.1, line 22-24).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu and Hillegass and D'Aria by providing specifically video encryption, in order to do secure video distribution. The Hatabu moving image transferring system, incorporating the Hillegass storing N encoded video data into N tracks and also error correcting code data as an independent track as well, further incorporating the D'Aria selecting the error correction codes with error rate less than a pre-determined error rate based on the available power level (SNR) and the error correction encoding scheme, further incorporating the Colligan video encryption and decryption, has all the features of claim 179.

21. **Claim 183** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Hillegass, further in view of D'Aria, and MPEG inherency supported by Hylton (US 5,708,961), hereafter referenced as Hylton.

Regarding **claim 183**, Hatabu and Hillegass and D'Aria disclose everything as claimed as applied above (see claim 176). Hatabu discloses that video stream is the standard MPEG compressed stream (par.116). However, Hatabu and Hillegass and D'Aria do not expressly disclose wherein the means for reconstructing the encoded data comprises means for determining at least one of a compression rate and a data type of the encoded data using at least one of:

- (a) a predetermined distribution data receiving session;
- (b) predetermined data identification information assigned to the transmitting unit of the data;
- (c) a distribution data receiving session, notified by the call connection processing; and
- (d) data identification information assigned to the transmitting unit of the data and notified by the call connection processing.

In the analogous field of endeavor, Hylton discloses Wireless On-Demand Video Distribution Using Digital Multiplexing. Hylton specifically discloses the means for reconstructing the encoded data comprises means for determining a data type (video or Audio data) of the encoded data using predetermined data identification information ( Packet ID, Fig.2; Fig.3 shows video and audio Packet ID) assigned to the transmitting unit of the data.

22. **Claim 184** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Hillegass, further in view of D'Aria, and MPEG inherency supported by Tudor

(Electronics & Communication Engineering Journal, December 1995), hereafter referenced as Tudor.

Regarding **claim 184**, Hatabu and Hillegass and D'Aria disclose everything as claimed as applied above (see claim 176). Hatabu discloses that video stream is the standard MPEG compressed stream (par.116). However, Hatabu does not expressly disclose wherein a unit of the encoded data transmitted by interleaving the unit or providing a time difference for the unit can be received, and a buffer size determined by at least one of:

- (a) a predetermined receive buffer size;
- (b) a buffer size notified by the call connection processing;
- (c) a buffer size calculated based on a predetermined content distribution rate and information on a time difference or interleave setting; and
- (d) a buffer size calculated based on a content distribution rate notified by the call connection processing and the information on the time difference or interleave setting; is secured so that the encoded data can be reconstructed.

In the analogous field of endeavor, Tudor discloses MPEG-2 Video Compression. Tudor specifically discloses a buffer size determined by a predetermined receive buffer size (Table on page 14 shows the predetermined Buffer Size for a specific profile and level) .



23. **Claim 185** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Hillegass, further in view of D'Aria, further in view of Malmgren (US 6,778,501), hereafter referenced as Malmgren.

Regarding **claim 185**, Hatabu and Hillegass and D'Aria disclose everything as claimed as applied above (see claim 176). However, Hatabu fails to disclose means for transmitting a reception status of distributed data to a content distribution apparatus.

In the analogous field of endeavor, Malmgren discloses Selective Repeat ARQ with Efficient Utilization of Bitmaps. Malmgren specifically discloses means (ARQ feed back mechanism, col.1, line 20-32) for transmitting a reception status of distributed data to a content distribution apparatus (notify the sender that PDU (data unit) was not correctly received, col.1, line 20-32), in order to ensure the reliable delivery (col.1, line 20-32).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically ARQ feedback mechanism which receiver uses to notify that a particular packet is not correctly received, in order to ensure the reliable delivery. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Malmgren ARQ feedback mechanism which receiver uses to notify that a particular packet is not correctly received, has all the features of claim 185.

***Conclusion***

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEE-YONG KIM whose telephone number is (571)270-3669. The examiner can normally be reached on Monday-Thursday, 8:00am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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